

**CLAIMS**

1. A distributed multiprocessing system, comprising
  - at least two hosts (2, 3, 4) connected to a network (1), each host having a
  - 5 processing unit (21, 31, 41) and internal memory (22, 32, 42) accessed by said processing unit;
  - a fault-tolerant external memory unit (6),
 wherein each host further comprises an access device (24, 34, 44) connected to said external memory unit (6), said device providing the processing unit of the
   
10 host with a transparent access to said external memory unit (6).
2. The system of claim 1, wherein for a processing unit (21, 31, 41), access time to said external memory unit (6) is less than three orders of magnitude larger than access time to said internal memory (22, 32, 42).
3. The system of claim 1 or 2, wherein the access device (24, 34, 44) in a host is
   
15 connected to a bus, and wherein access time to said external memory unit takes place in less than one cycle of said bus.
4. The system of claim 1, 2 or 3, wherein for a processing unit (21, 31, 41), access time to said external memory unit (6) is at least two orders of magnitude smaller than access time to another host through said network (1).
- 20 5. The system of one of claims 1 to 4, wherein the access device (24, 34, 44) has a memory-mapped connection connected to the processing unit (21, 31, 41) and a driver connected to said memory-mapped connection and to said external memory unit (6).
6. The system of one of claims 1 to 4, wherein the access device (24, 34, 44) has a
   
25 internal memory module-like connection connected to the processing unit (21, 31, 41) through a memory bus, and a driver connected to said internal memory module-like connection and to said external memory unit (6).
7. The system of one of claims 1 to 6, wherein the external memory unit comprises
  - at least two access server devices (52, 53, 54) each connected to the access

device (24, 34, 44) of a host and

- a fault tolerant memory (58) connected to said server devices.

8. The system of claim 7, wherein said a fault tolerant memory (58) comprises a request server (64) connected to said server devices and two memory controllers (66, 68) connected to said request server, each memory controller being  
5 connected to memory banks (72, 74).

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